

**BEFORE THE  
SURFACE TRANSPORTATION BOARD**

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**EX PARTE NO. 582  
PUBLIC VIEWS ON MAJOR RAIL CONSOLIDATIONS**

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**STATEMENT  
OF  
HUGH L. RANDALL AND  
WILLIAM C. HARSH, JR.  
VICE PRESIDENTS OF  
MERCER MANAGEMENT CONSULTING, INC.**

**March 9, 2000**

# **Statement of Hugh L. Randall and William C. Harsh, Jr.**

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## ***Introduction***

This statement of Hugh L. Randall and William C. Harsh, Jr. represents the views and opinions of Mercer Management Consulting, Inc. (Mercer) with respect to major railroad consolidations and the future structure of the North American railroad industry. Mr. Randall is a vice president and director of Mercer and directs the firm's global Transportation Group. Mr. Harsh is a vice president in Mercer's Transportation Group. Both Mr. Randall and Mr. Harsh have many years of experience consulting to railroads in the United States and throughout the world. Their resumes are included as Appendix A to this statement.

Mercer maintains one of the largest transportation consulting practices in the world. Mercer has not only provided strategic, operational, and management consulting advice to virtually every Class I railroad in North America, but it has also acted as the primary advisor to numerous governments and railroads throughout the world with respect to railroad restructuring projects. This global perspective has given Mercer an opportunity over the last 25 years to observe patterns and trends in the structuring of the railroad industry, and to develop insights into the business strategies which have succeeded – and failed – within the industry. A summary of Mercer's relevant railroad transportation experience is included as Appendix B to this statement.

Mercer's statement is organized in accordance with the four questions posed by the Surface Transportation Board (the Board) in its January 24, 2000 decision in this proceeding. In that decision, the Board asked for views concerning:

1. Whether the proposed merger of Burlington Northern Santa Fe and Canadian National (BNSF/CN) would lead to significant additional consolidation in the railroad industry
2. The timing of this potential consolidation
3. The effect of railroad consolidations on the financial condition of the railroad industry
4. Whether the railroad industry has and will have the necessary infrastructure, capacity, and configuration to meet expected demand for freight service now and in the future

This document presents Mercer's views with respect to these matters.

## **Section I. The Prospect for Further Consolidation**

In its January 24, 2000, decision, the Board noted that there has been speculation that the strategic responses of the remaining North American rail carriers to the proposed BNSF/CN merger will lead to a new round of major railroad consolidations, ultimately resulting in the formation of two North American transcontinental railroad systems.

Mercer does not believe that, after the BNSF/CN transaction, significant further consolidation within the North American railroad industry necessarily should occur immediately, if at all.

Mercer believes, based upon its extensive research into business strategy over the past decade,<sup>1</sup> that the most successful companies respond constantly to the evolving needs of their customers. In evaluating the proposed merger between BNSF and CN in this light, it appears that the managements of these two railroads have identified unmet customer needs for efficient, cost-effective and integrated north-south railroad service. These needs arise from the continuing integration of the North American economies brought about by the Free Trade Agreement (FTA) implemented by the United States and Canada in 1989 and the North American Free Trade Agreement (NAFTA) implemented by the United States, Canada, and Mexico in 1994. To serve this unmet customer need, BNSF and CN have proposed to create a holding company that will coordinate the service provided by their respective companies in order to serve north-south traffic flows more efficiently.

The north-south trade among Canada, the United States, and Mexico to which BNSF and CN appear to be responding is growing very rapidly. Beginning in 1989 with the implementation of the FTA, and continuing in 1994 with the implementation of NAFTA, the development of trade among the three NAFTA partners has increased substantially every year.

- *United States-Canada:* Between 1984 and 1988, trade between the United States and Canada increased by a compound annual rate of 7 percent, from \$113 billion in 1984 to \$150 billion in 1988. Trade continued to grow by 7 percent per year after the implementation of the FTA; however, after the implementation of NAFTA, trade growth increased to 10 percent per year, with total trade reaching \$378 billion in 1999 (see Figure 1).

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<sup>1</sup>Mercer's research in the area of business strategy is presented publicly in four books: *Grow to Be Great* (The Free Press, 1995), *Value Migration* (Harvard Business School Press, 1997), *The Profit Zone* (Times Business Random House, 1998) and *Profit Patterns* (Times Business Random House, 1999). *The Profit Zone* was selected as one of the ten leading business books of 1998 by *Business Week*. Mercer also has conducted substantial research into business strategy for its clients, including railroads, around the world.

- *Mexico-Canada:* In 1993, the year prior to the implementation of NAFTA, trade between Mexico and Canada totaled \$3.4 billion. From 1993 to 1999, trade increased by 14 percent per year, up to \$7.6 billion in 1999 (see Figure 2).
- *United States-Mexico:* Between 1984 and the implementation of NAFTA in 1994, trade between Mexico and the United States increased by a compound rate of 12 percent per year, growing from \$30 billion in 1984 to \$82 billion in 1993. Following implementation of NAFTA in 1994, trade increased by 19 percent per year, up to \$229 billion in 1999 (see Figure 3).

In sum, total north-south trade within North America since the implementation of NAFTA has been increasing very rapidly – and it is to this trend that BNSF and CN appear to be responding in their merger application. We have seen no evidence that this trend will change (see Figure 4).

Not only is the volume of trade growing, but the focus of this growth should present opportunities for railroads if they are able to respond in a timely way. Given their economics, railroads generally enjoy a competitive advantage in transporting large volumes of goods over long distances (generally over 500 miles). Growth in north-south trade includes such opportunities.

- *Products:* The products that are growing fastest in north-south trade include many that are important to the railroads' current traffic base. As shown in Figure 5, between 1990 and 1998 trade between the United States and Canada produced double-digit growth for commodities such as grain, forest products, feed, and plastics. Other commodities important to railroads – including stone, clay, and cement; iron and steel products; chemicals; non-ferrous metals; and automobiles and auto parts – also increased significantly.

We expect that the growth of traffic in these products will continue. As Figure 6 shows, north-south traffic between the United States and Canada in most of these commodities should continue to grow through 2003.

- *Distance:* North-south trade stimulated by the FTA and NAFTA also is shifting from shorthaul traffic localized near the borders between the United States and Canada and the United States and Mexico to longer-haul routes servicing interior points within each country. Between 1989 and 1998, the highest export growth from Canada to the United States has been to markets in the western and southwestern United States. Trade between Canada and these states is growing by more than 15 percent per year (see Figure 7).

This trend is reducing the importance of relatively short hauls from Canada to the northern tier of states, and increasing the importance of long hauls to points further

south. Between 1989 and 1998, exports from Canada to the northern border states declined from 70 percent to 63 percent, while exports to the western and southwestern United States grew from 16 percent to 22 percent (see Figure 8). Longer hauls are more likely to involve and require rail transport.

Thus, the growth of north-south traffic is a dramatic development. In 1989, north-south trade between Canada and the United States was somewhat less than the east-west trade between the Canadian provinces. In 1996, only seven years later, the situation was dramatically reversed. In 1996, the volume of north-south, cross-border traffic was nearly one and a half times greater than the traffic flowing east-west between the provinces (see Figure 9). Moreover, this trend was accelerating.

Faced with market change of this magnitude, railroads, like any business, need to respond rapidly to meet the evolving needs of their customers. BNSF and CN appear to believe that their customers are demanding faster, more efficient transport links to facilitate the north-south flow of exports and imports between the NAFTA countries. That is one of the major premises underlying the proposed merger.

Historically, some railroads have responded to a merger among competitors by engaging in further mergers. In cases where responsive mergers are driven by opportunities to better meet the needs of the railroads' customers, and thus seek to create benefits similar to those that will be enjoyed by the customers of a competitive merged railroad, such mergers can make business sense.

For instance, customers located on the Union Pacific (UP) and Canadian Pacific (CP) may sense opportunities to better meet the needs of its customers for more efficient and cost-effective north-south service to compete with the service provided by a merged BNSF/CN system. If this is the case, then it may make business sense for the managements of UP and CP to explore a merger that would satisfy their customers' demand for competitive service.

However, in cases where responsive mergers are not based upon opportunities for improving customer service, they do not make business sense and, we believe, should not occur. Specifically, we are not aware of any significant customer demand for consolidating the major eastern and western railroads in the United States at this time to facilitate east-west rail service. We expect that this proceeding will reveal a present lack of demand for such an east-west transcontinental United States duopoly system.

## ***Section II. The Timing of the Potential Consolidation***

We are aware of the fatigue that some railroads and their customers are expressing as a result of the difficulties encountered after two recent railroad consolidations. However, BNSF and CN have not had such problems, and are thus free to focus on meeting the next level of customer requirements. In this context, we believe that the need to respond to market and customer demands requires the managements of BNSF and CN to proceed with consolidation of the two railroads.

It is well known that markets wait for no one. We live in a rapidly globalizing world economy, and the North American marketplace created by NAFTA is developing very quickly. Railroad customers participating in this marketplace need efficient transportation, and if the railroads cannot supply this want, customers will buy their transportation from other, more efficient providers.

As a principal advisor to the Government of Mexico, Mercer knows that this was the Government's primary motivation in privatizing its railroad network. Mexico realized that its railroads would have to prepare quickly to compete in the rapidly developing NAFTA environment. Otherwise, they would be left behind to wither.

The NAFTA environment is already challenging to BNSF and CN. Truckers are developing substantial north-south flows of heavy commodities – including grain, fertilizer, plastic pellets, steel, and lumber – across the border between Canada and the United States. As discussed below, there are at least one million truckloads of bulk commodities moving annually between locations served at one end by CN and at the other by BNSF. Not only are these bulk commodities at the heart of the railroads' core business, but many of the shipments take place in lanes more than 500 miles long where railroads historically have enjoyed a competitive advantage.

- *Bulk truck movements from the United States to Western Canada:* Total road and rail traffic from BNSF's service territory in the United States to CN's service territory in Western Canada amounted in 1998 to 13.8 million tons, of which 10.4 million moved by truck (and the remainder by rail).
  - Of this northbound truck traffic, 6.9 million tons consisted of primary products moving in bulk. Broken stone made up almost 1.5 million tons (21 percent). A further 300,000 tons (5 percent) came from other aggregates. Primary iron and steel products contributed 1 million tons (15 percent), with other product groups

such as chemicals (14 percent), wood products (10 percent), and agricultural products making up most of the remainder.<sup>2</sup>

- At an average of 15 tons per truckload, this bulk traffic represents 460,000 truck movements annually – many of them longhaul shipments greater than 500 miles. For example, bulk truck traffic to the four westernmost Canadian provinces from just four relatively longer-haul origin states (California, Texas, Utah, and Wyoming) amounted to approximately 1 million tons. This longhaul bulk traffic is at the heart of the BNSF and CN service territories.
- *Bulk truck movements from Western Canada to the United States:* Total road and rail traffic from CN's service territory in Western Canada to BNSF's service territory in the United States amounted in 1998 to 35.7 million tons, of which 13.3 million moved by truck (and the remainder by rail).
  - Of this southbound truck traffic, 7.6 million tons consisted of primary products moving in bulk. This tonnage included 2 million tons of lumber and forest products (27 percent) and 1.2 million tons of grains and seeds (17 percent), with the remainder being primarily made up of chemicals (12 percent), potassium and sodium (8 percent), cement and concrete (8 percent), and processed agricultural products, such as livestock or seed oils (5 percent).<sup>3</sup>
  - At an average of 15 tons per truckload, this bulk traffic represents more than 500,000 truck movements annually – many of them longhaul shipments greater than 500 miles. A significant portion of this bulk truck traffic moved over distances where rail normally has a competitive advantage. For example, bulk truck traffic from the four Western Canadian provinces to California, Texas, Iowa, and Michigan amounted to approximately 1 million tons.

Participants in the cross-border market interviewed by Mercer estimated that this market will grow by 15 percent or more per year – well ahead of the underlying growth rates of the United States and Canadian economies. These participants said that the pace is driven by several factors, including the increasing mobility of companies to relocate operations to low-cost areas, the growing NAFTA orientation of industry, and the centralization of businesses, whereby regional

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<sup>2</sup>Each of these volumes and percentages underestimates the true volumes of traffic belonging to their respective categories, as these categories were generated for illustrative purposes from high-volume 4-digit Standard Transportation Commodity Codes (STCC). Total volumes cited in this paper reflect the sum of all moves, from both high- and low-volume STCC codes.

<sup>3</sup>Each of these volumes and percentages underestimates the true volumes of traffic belonging to their respective categories, as only the data from high-volume 4-digit STCC codes were included in this analysis.

distribution centers are being closed in favor of direct cross-border deliveries from central manufacturing locations.

Clearly, if the CN and BNSF railroads are not permitted to offer single-line cross-border rail services in the near future, longhaul truck traffic will continue to increase. If such traffic continues to grow just at the rate of cross-border trade, the one million truckloads moved in 1998 will double by the year 2003. Neither the BNSF and CN, nor other North American railroads, can afford to sit still while trucking competitors develop their networks. If they do – or are forced to – they may well find that these core to markets are lost to them for many years to come.

Nor are competitive challenges limited to traditional competitors. As for most businesses entering the 21st century, the railroad industry is being challenged increasingly by non-traditional players as well.

- Ford recently awarded a contract to track individual vehicle movements to UPS Logistics. This is a significant encroachment into the railroads' competitive space, and we expect to see additional encroachment in the automobile industry and other industries.
- New competitors, including European competitors, are establishing positions in NAFTA markets. Deutsche Post recently bought AEI, a significant North American freight forwarder and 3PL company. Ocean Group has purchased NFC, and recently Federal Express announced its intention to purchase Tower Group.

Mercer is aware, through its role as advisor to many carrier and financial participants in the transportation marketplace worldwide, that non-traditional competitors are actively developing strategies to handle NAFTA transportation flows. In our view, if BNSF and CN are delayed in implementing a merged corporate structure it will deny them some needed flexibility in responding to non-traditional – as well as traditional – competitive challenges.

### ***Section III. Financial Condition of the Railroad Industry***

Railroad managements are under enormous competitive pressure to find new productivity gains each year. As Figure 10 illustrates, railroads have faced a “cost-rate gap” caused by declining yields (revenue per ton-mile hauled) and increasing input costs (the cost of a gallon of fuel, an hour of labor, etc.) for the past two decades. They have survived in this environment only by continually finding new sources of productivity. Many of these efficiencies have come from increased scale and the opportunity to consolidate functions following mergers. In most years these efficiencies – including the efficiencies made possible by mergers – have created sufficient productivity gains to bring the railroads’ cost per ton-mile below their revenue per ton-mile. This has produced an operating income and enabled the rail industry to survive.

Shippers, however, are the major beneficiaries of this process. As Figure 10 also shows, most of the productivity gains achieved by the railroads have been passed through to their customers in the form of lower rates. This has not been done voluntarily, but rather as the result of intense intramodal and intermodal competition. As input costs continue to increase, railroad managers must now find new sources of productivity. Most of the low-hanging fruit, however, has long since been harvested.

Railroad managers must find this additional productivity in a tough environment in which they face three very difficult challenges:

- *Share of market and revenues:* As Figure 11 shows, the Class I railroads have grown their freight volume (in ton-miles) by 2.5 percent per year since the Staggers Act (versus 3.8 percent for trucks), while their share of total freight revenues has increased by only 0.9 percent per year over the same time period (versus 6.1 percent for trucks). This means that each year, railroads perform a greater share of the transportation work and receive a smaller share of available transportation revenues.
- *Customer demands:* Railroads must meet the evolving needs of their customers. Many of these customers are facing significant cost challenges, and are likely to look to the railroads to provide part of the solution.
  - For example, if the history of deregulated marketplaces is any guide, energy prices will continue to fall dramatically as the nation’s utility marketplace deregulates. The utilities, which are among the railroads’ largest and most financially important customers, will assuredly seek to pass on a portion of these rate declines to their suppliers. This will certainly put further pressure on the railroads to continue to reduce coal rates and, therefore, coal hauling costs. At the same time, the anticipated structural changes in the energy industry are likely to lead to unprecedented switching of energy production among generating stations, which will lead in turn to pressure for shorter contracts for coal transportation. Customers

will expect railroads to respond to this pressure, and to find ways to accommodate their needs for greater flexibility. This will force railroads either to invest large sums in coal cars and facilities that might frequently stand idle or to structure new arrangements.

- Shippers of most commodities also are demanding ever-increasing reliability from their transportation providers, together with the ability to hit shrinking delivery windows brought about by “just-in-time” requirements. As we noted earlier, if railroads are not able to respond they will see both non-traditional competitors – such as UPS Logistics – and traditional competitors such as long-distance bulk truckers encroach upon their business.
- *Capital investment requirements:* Meeting the challenge of finding new sources of productivity to offset constantly declining revenue per ton-mile, as well as rapidly increasing customer demands, comes at a steep price. Railroads reinvest at the highest rate of any industry in the United States (see Figure 12). Moreover, their level of capital investment has been trending up, both in absolute terms and as a percentage of revenue. In absolute terms, total Class I rail capital expenditures have increased from \$3.6 billion in 1990 to \$7.4 billion in 1998 – an increase of 105 percent. Class I railroad capital expenditures as a percentage of operating revenue have increased every year since 1991 (see Figure 13).

Given the challenges facing the railroad industry, we believe that restricting railroad managers’ access to any significant source of productivity improvements – including mergers – will work to the detriment of the financial health of the industry.

#### ***Section IV. Railroad Industry Capacity***

The capacity of a railroad system is dependent upon the capacity of the subsystems that make up the transportation functions of a railroad. These subsystems include:

- The physical facilities, including track, signals, interlocking plants, classification facilities, terminals, servicing and fueling facilities and, in some cases, power distribution systems
- Equipment, including cars and locomotives
- Crews, which must be available to operate trains and which operate subject to restrictions created by regulations and labor agreements
- Operating practices such as (a) policies on train size, speed, and power, (b) train priorities, (c) train scheduling, (d) blocking and classification practices for marshalling trains, and (e) maintenance policies

While most of the railroad network in North America presently has sufficient capacity to handle current and reasonably anticipated projected traffic flows, choke points do exist today and will inevitably emerge at other places in the system if the industry is successful in attracting new traffic. Most of these are located in urban areas and terminals. Choke points can be addressed by investing in additional capacity or by improving utilization of existing assets. The former can require substantial capital, while the latter generally does not.

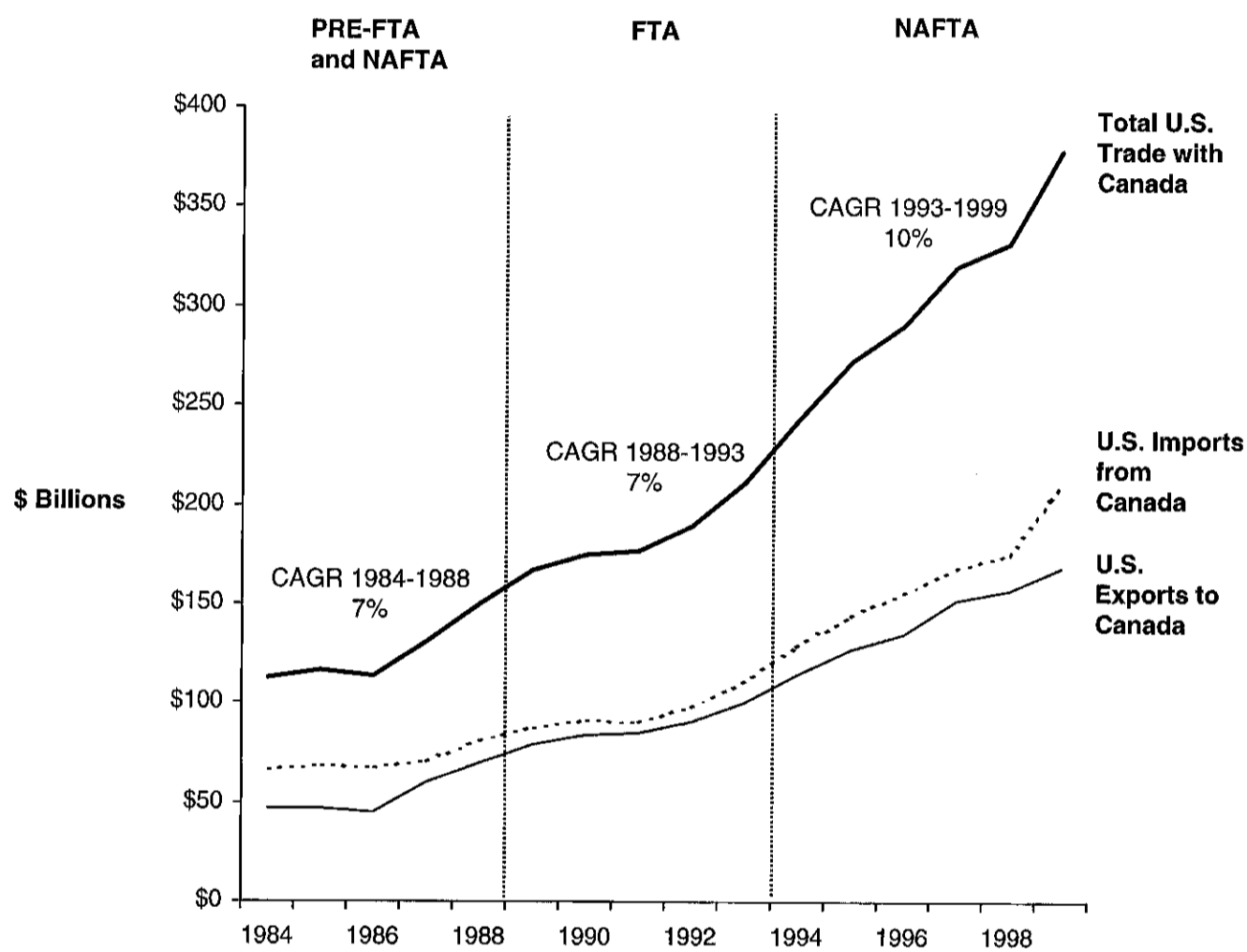
Increasing system capacity is an incremental task, involving changes to a variety of subsystems. We believe that the railroads are aware of the choke points that presently exist and are addressing them. As we stated earlier, railroad capital investment is higher as a percentage of revenue than for any other industry in the United States, and it has been growing both in absolute terms and as a percentage of revenue. A list of recent capital projects undertaken by the railroad industry to increase capacity is included as Appendix C to this statement. Provided that the railroads operate in a regulatory and commercial environment that permits them to continue to attract sufficient capital and skilled management, we see no reason for them not to continue to address choke points as they develop.

#### ***Conclusion***

In conclusion, we believe that the state of the railroad industry is quite typical of industries in today's rapidly changing business environment. Managements are seeking to identify emerging and evolving customer needs and to develop strategies to meet them. They are doing this in a globalized competitive environment in which their customers must compete in new markets worldwide, non-traditional competitors are emerging from all directions, and timing is critical.

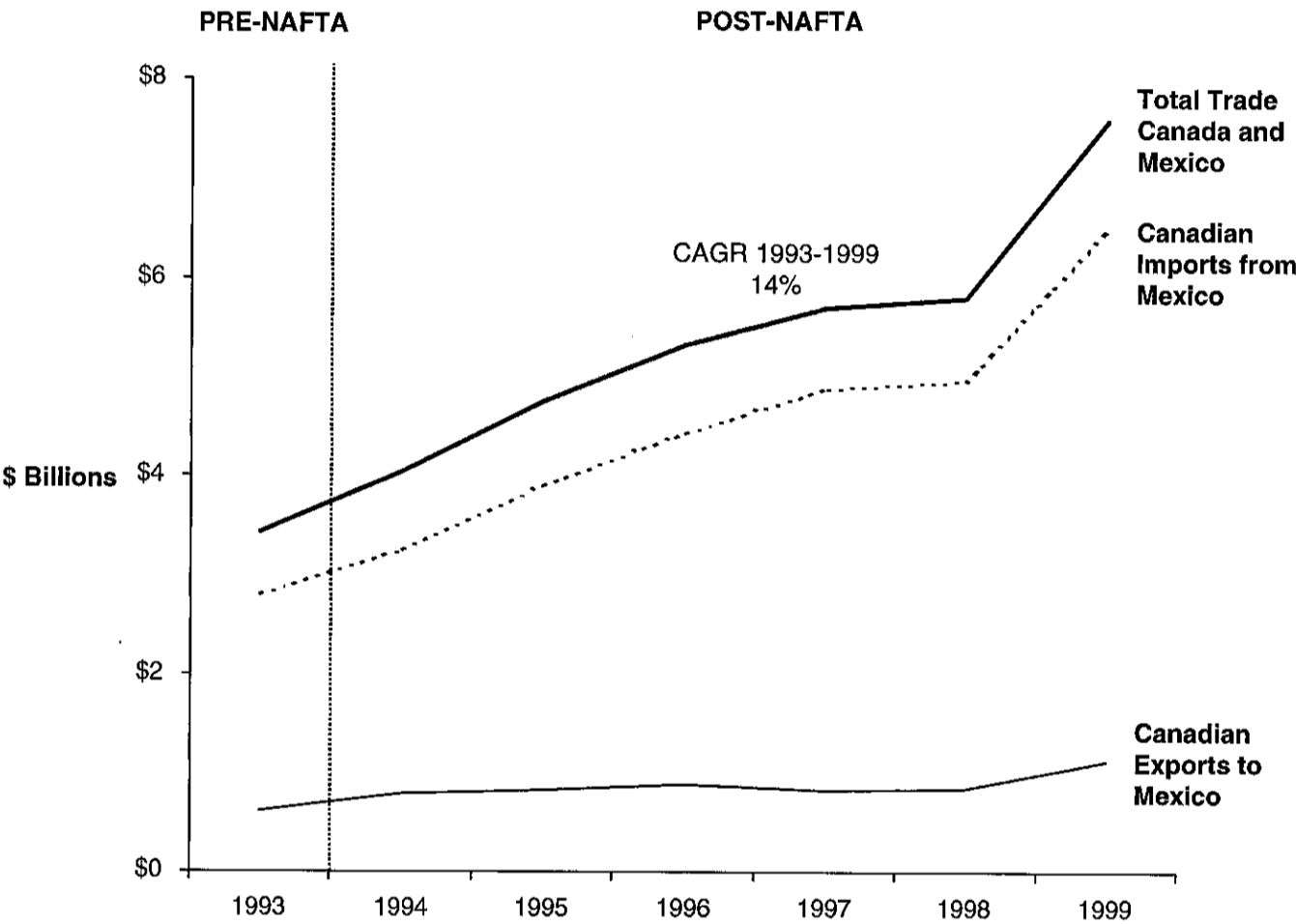
They are coping with the challenges created as intense competition drives down prices at the same time input costs rise. And they are struggling to build capacity for the future while at the same time addressing choke points that develop in the present system. The actions taken by managements to address all of these challenges often create short-term market dislocations and can cause well-publicized problems. But we believe that few would dispute that the net effect of the process is to create an ever-more efficient and competitive economy. We believe that this conclusion clearly applies to the railroad industry in North America.

Figure 1  
United States-Canada Trade – 1984-1999  
(merchandise exports and imports)



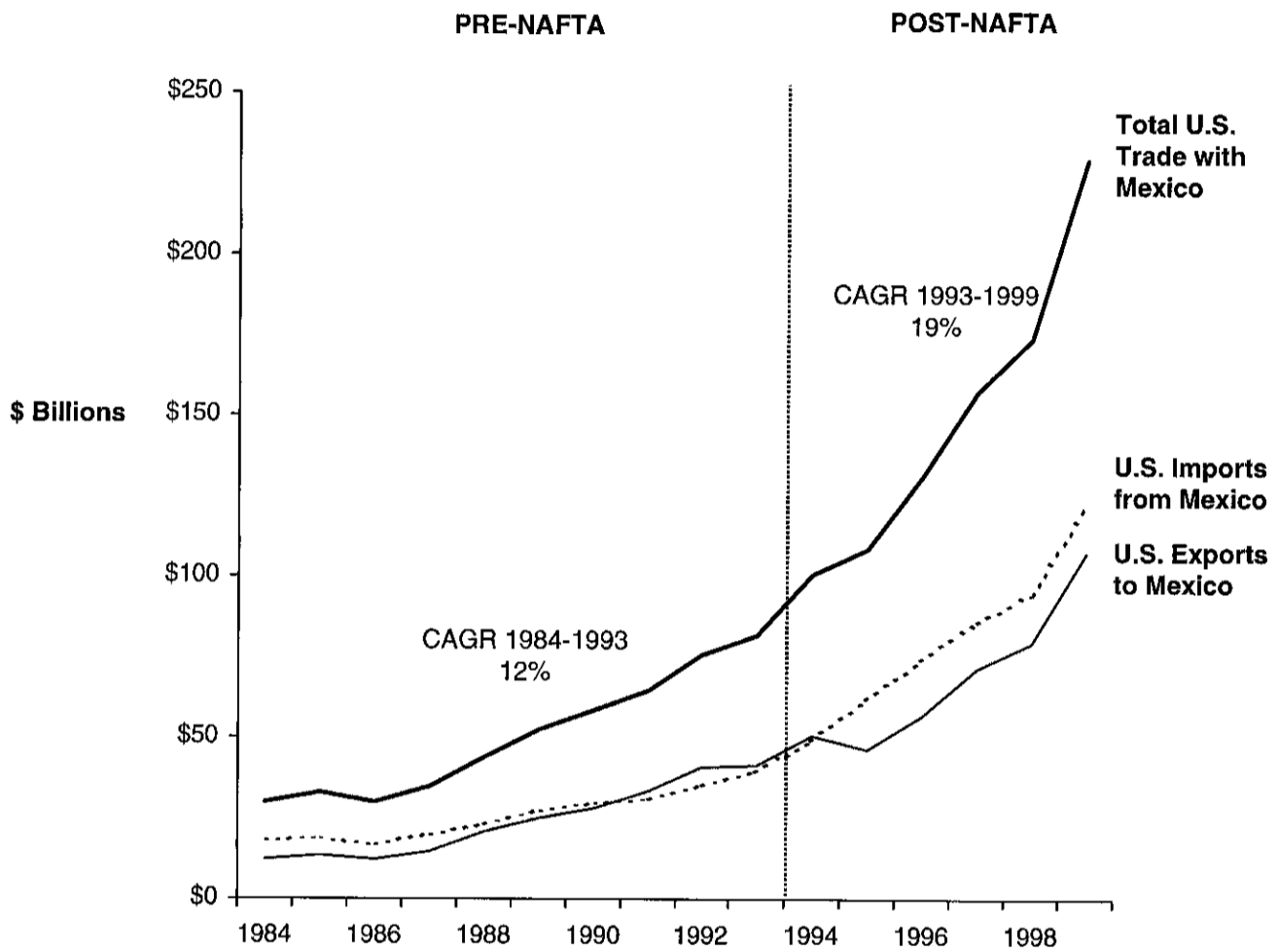
Source: *The Statistical Abstract of the United States*, 1984-1999; "NAFTA Works for Mexico and Canada, 1993-1999," [www.nafta-mexico.org](http://www.nafta-mexico.org).

**Figure 2**  
**Canada-Mexico Trade – 1993-1999**  
(merchandise exports and imports)



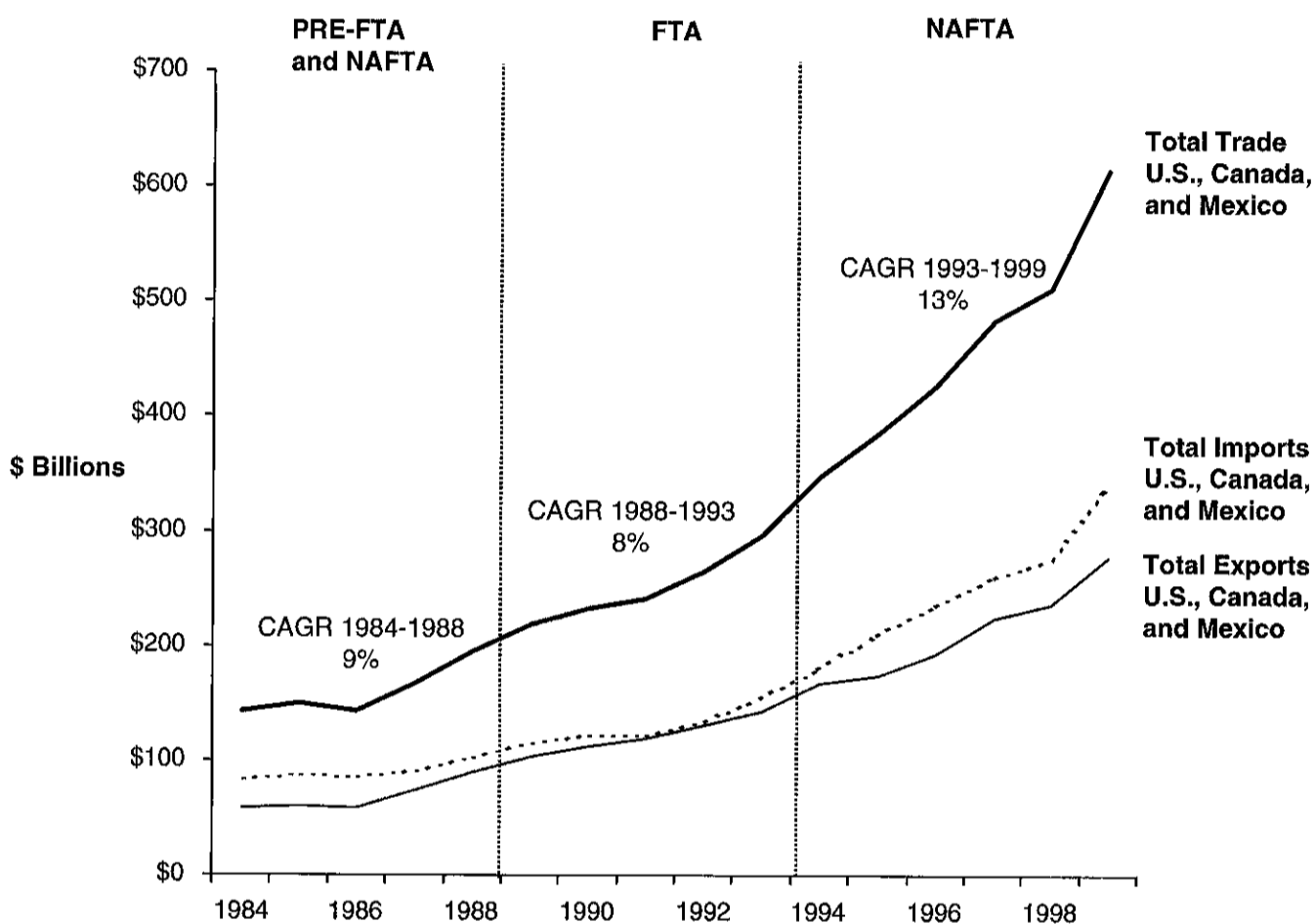
Source: *The Statistical Abstract of the United States, 1984-1999*; "NAFTA Works for Mexico and Canada, 1993-1999," [www.nafta-mexico.org](http://www.nafta-mexico.org).

**Figure 3**  
**United States-Mexico Trade – 1984-1999**  
 (merchandise exports and imports)



Source: *The Statistical Abstract of the United States, 1984-1999*; "NAFTA Works for Mexico and Canada, 1993-1999," [www.nafta-mexico.org](http://www.nafta-mexico.org).

**Figure 4**  
**Total North American Trade – 1984-1999**  
 (merchandise exports and imports)



Note: Data for Canada-Mexico trade is not included for years 1984-1992.

Source: *The Statistical Abstract of the United States*, 1984-1999; "NAFTA Works for Mexico and Canada, 1993-1999," [www.nafta-mexico.org](http://www.nafta-mexico.org).

Figure 5

Historic United States-Canada Trade Growth by Commodity – 1990-1998

Southbound	1998 Metric Tons (M)	1990 to 1998 (CAGR)	1990 to 1998 Change In Metric Tons (M)
Forest products	24.9	6.8%	10.2
<b>Stone, cement and clay</b>	<b>18.7</b>	<b>8.1%</b>	<b>8.7</b>
Iron and steel	13.2	7.8%	6.0
<b>Wood products</b>	<b>8.3</b>	<b>11.2%</b>	<b>4.7</b>
<b>Grain</b>	<b>6.0</b>	<b>16.7%</b>	<b>4.3</b>
Inorganic chemicals	18.6	2.9%	3.8
Fertilizers	13.2	2.5%	2.4
Motor vehicles	5.3	7.5%	2.3
Paper products	12.0	2.3%	2.0
Non-ferrous metals	4.4	7.8%	2.0
Animal feed	3.4	10.4%	1.9
<b>Plastics</b>	<b>1.9</b>	<b>12.4%</b>	<b>1.2</b>

Northbound	1998 Metric Tons (M)	1990 to 1998 (CAGR)	1990 to 1998 Change in Metric Tons (M)
Parts for motor vehicles	11.0	6.9%	4.5
<b>Plastics</b>	<b>3.7</b>	<b>8.6%</b>	<b>1.8</b>
Forest products	12.2	2.0%	1.8
Organic chemicals	5.2	5.0%	1.7
<b>Paper products</b>	<b>3.6</b>	<b>7.1%</b>	<b>1.5</b>
Stone, cement and clay	11.9	1.7%	1.5
Iron and steel	3.6	7.0%	1.5
Inorganic chemicals	4.2	4.7%	1.3

Source: WEFA, World Industry Services, February 2000; Mercer analysis.

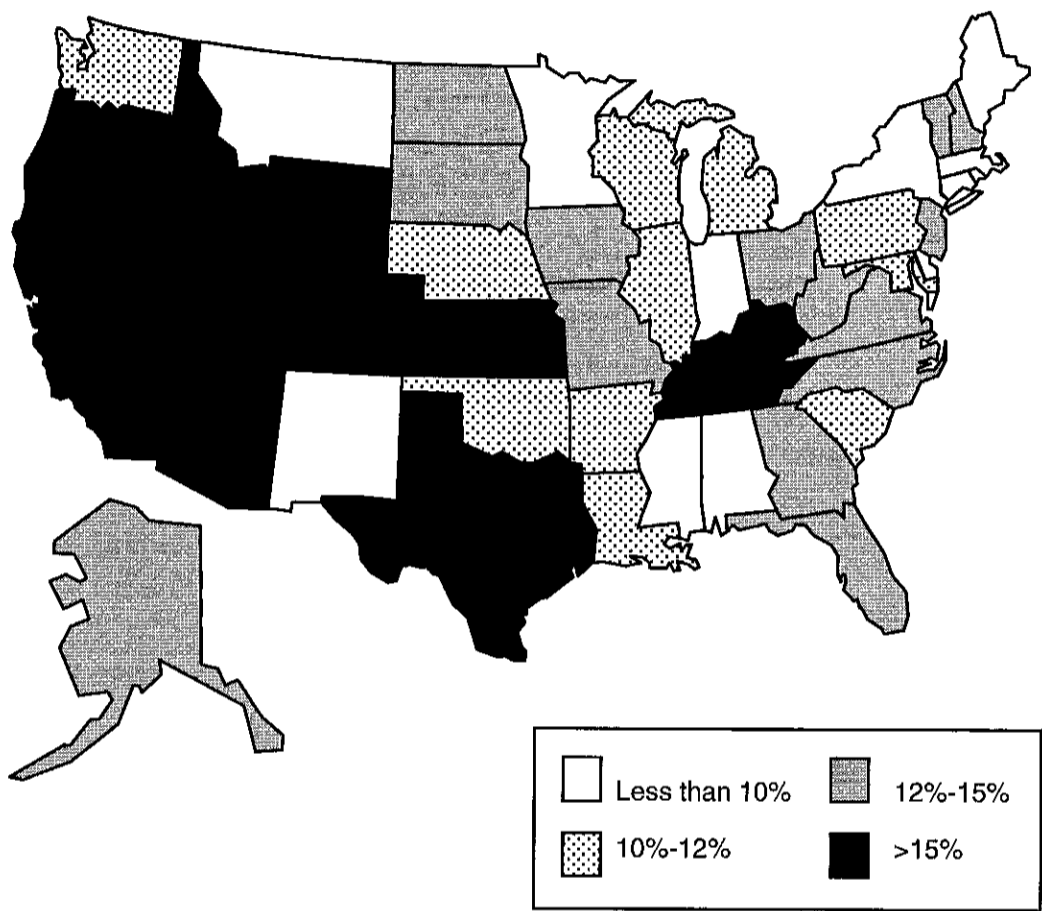
**Figure 6**  
**Projected United States-Canada Trade Growth by**  
**Commodity – 1998-2003**

Southbound	1998 Metric Tons (M)	1998 to 2003 (CAGR)	1998 to 2003 Change in Metric Tons (M)
<b>Inorganic chemicals</b>	18.6	4.7%	4.8
Forest products	24.9	3.5%	4.7
Paper products	12.0	4.0%	2.6
Stone, cement and clay	18.7	2.4%	2.3
Non-metallic minerals	13.3	2.9%	2.0
Iron and steel	13.2	2.6%	1.8
<b>Non-ferrous metals</b>	4.4	5.7%	1.4
Motor vehicles	5.3	4.4%	1.3
Pulp	6.2	3.6%	1.2

Northbound	1998 Metric Tons (M)	1998 to 2003 (CAGR)	1998 to 2003 Change in Metric Tons (M)
Parts for motor vehicles	11.0	5.3%	3.3
Forest products	12.2	3.7%	2.4
<b>Organic chemicals</b>	5.2	5.0%	1.4
<b>Plastics</b>	3.7	6.6%	1.4
Non-metallic minerals	12.8	1.8%	1.2
Stone, cement and clay	11.9	1.8%	1.1

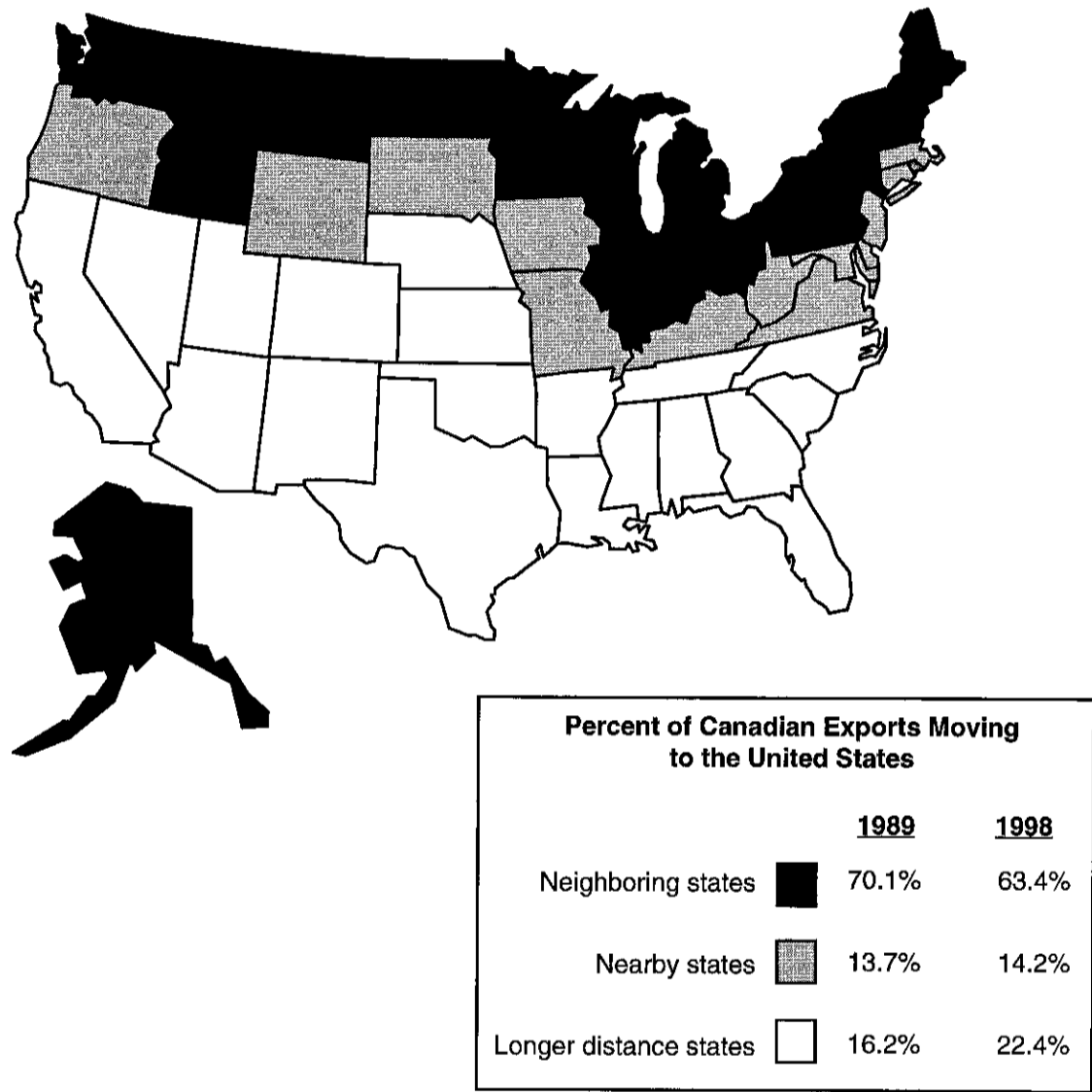
Source: WEFA, World Industry Services, February 2000; Mercer analysis.

**Figure 7**  
**Average Annual Growth in Canadian Exports to the United States – 1989-1998**  
(by state)



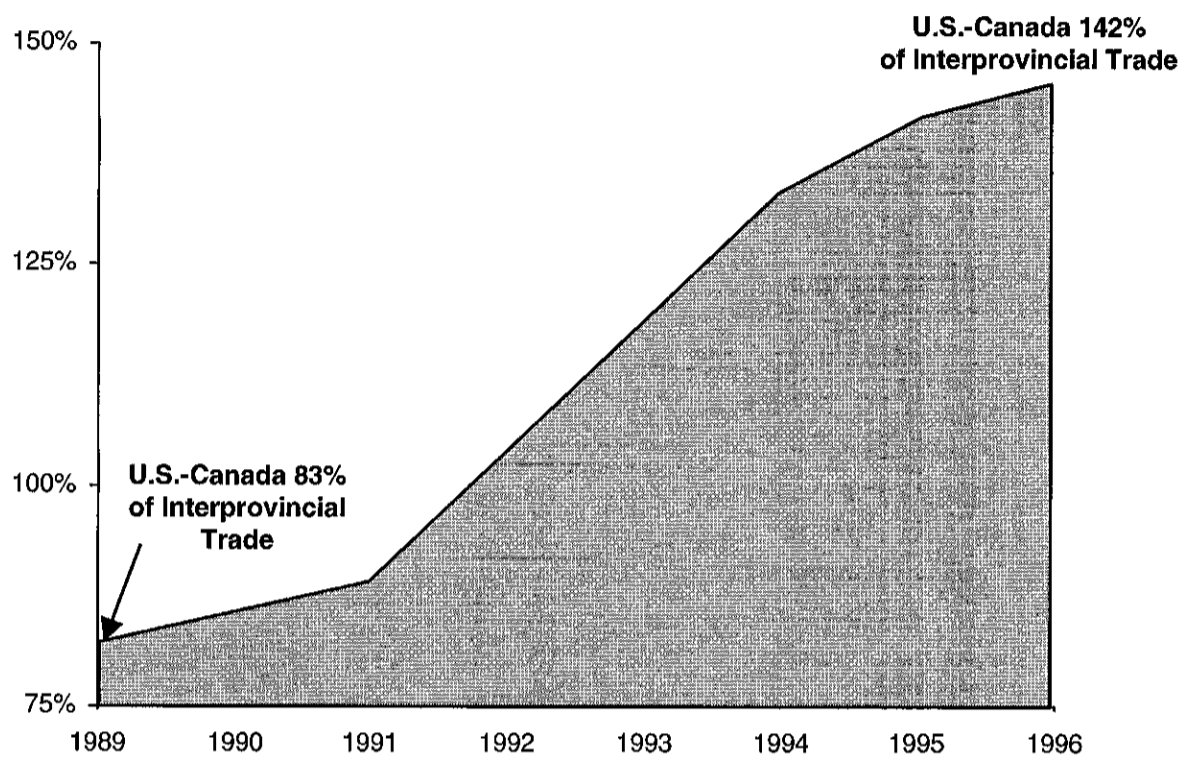
Source: Industry Canada compilations based on Statistics Canada data.

**Figure 8**  
**Percent of Canadian Exports Moving to the United States – 1989-1998**  
(by state)



Source: Industry Canada compilations based on Statistics Canada data.

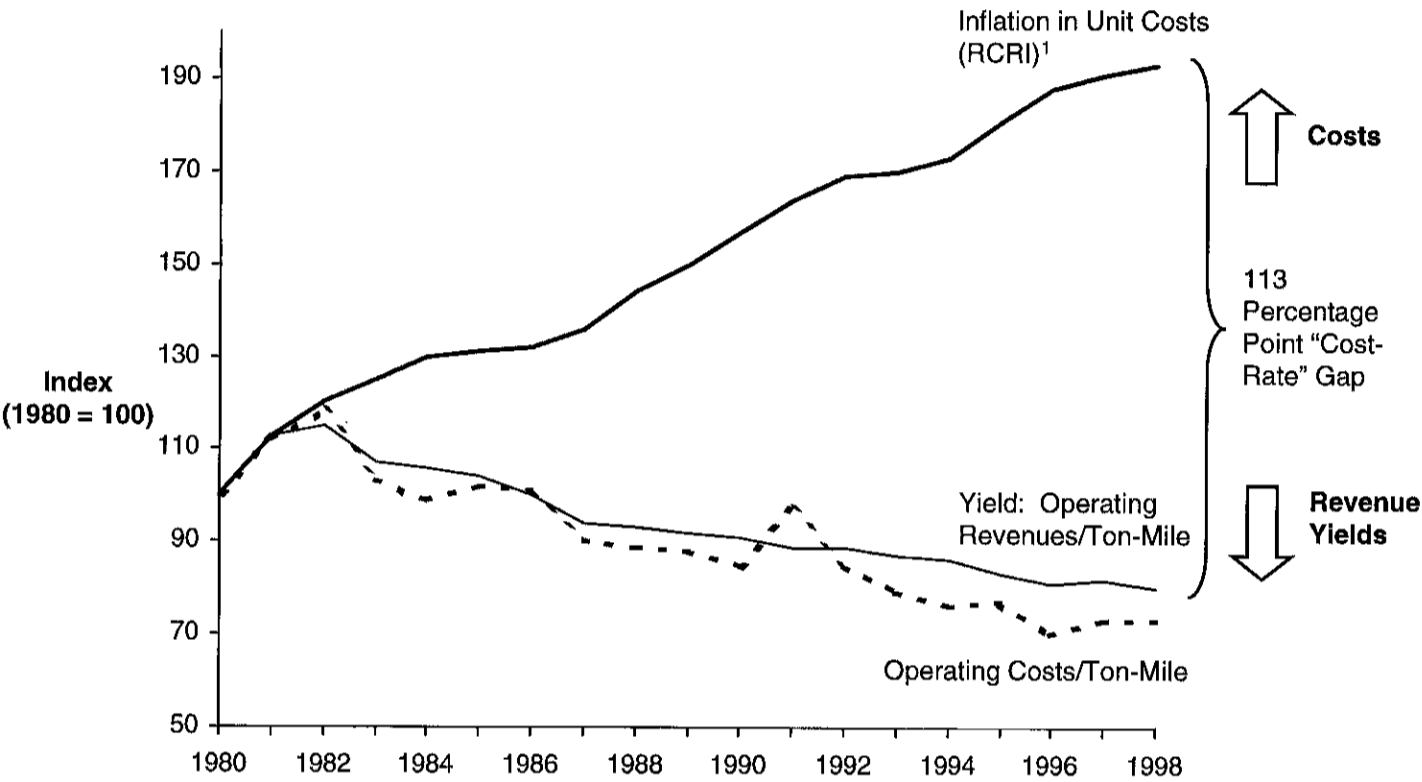
**Figure 9**  
**Ratio of Canada-U.S. Trade to Trade Within Canada – 1989-1996**



	<u>1989</u>	<u>1996</u>
	in C\$ Billions	
U.S.-Canada trade	C\$235	C\$456
Interprovincial trade	C\$282	C\$320

Source: Industry Canada compilations based on Statistics Canada data.

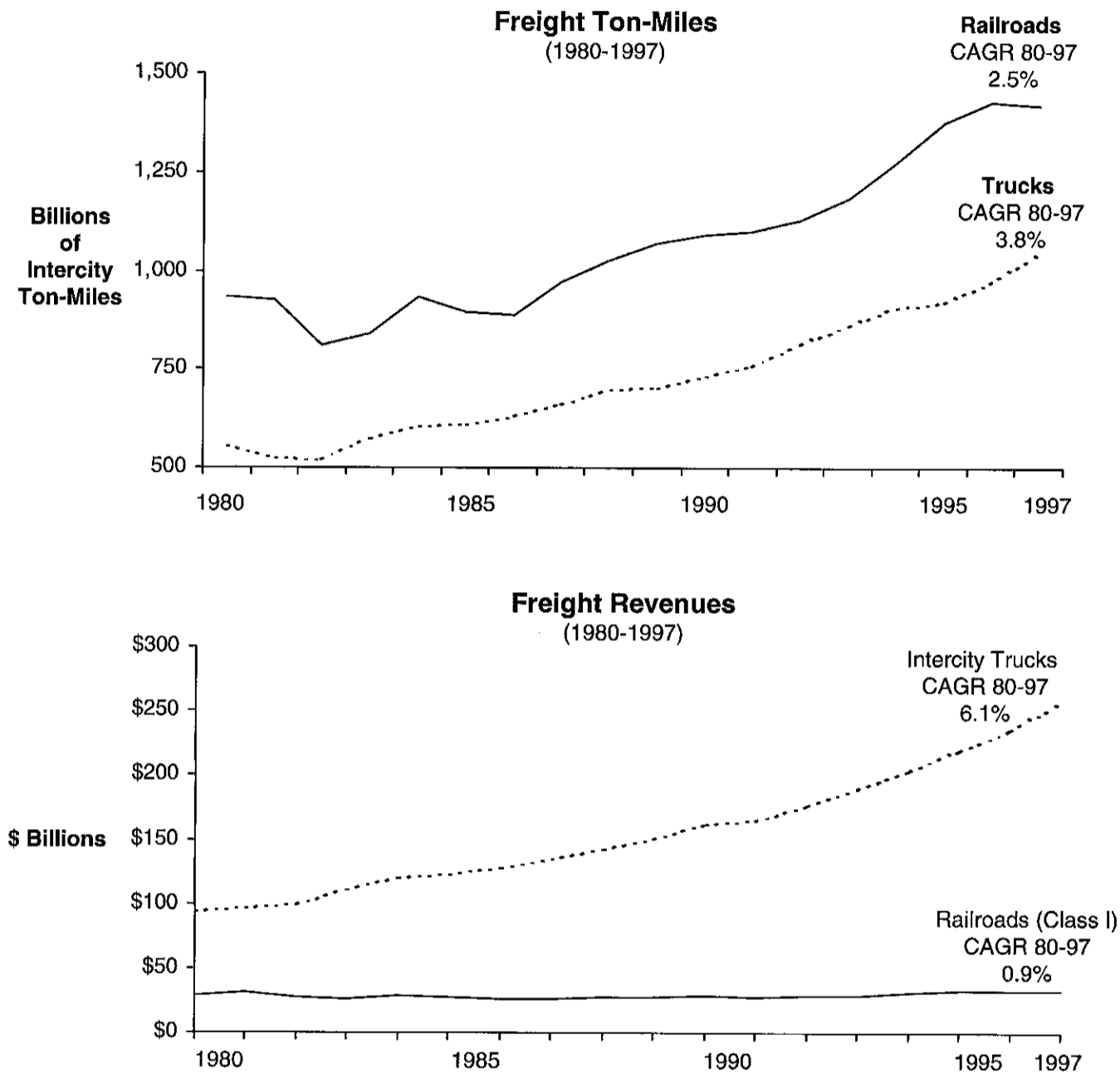
Figure 10  
“Cost-Rate Gap” Average Revenues and  
Unit Costs – 1980-1998



Source: *Railroad Facts, 1999 Edition*, Association of American Railroads; Mercer analysis.  
<sup>1</sup>Railroad Cost Recovery Index.

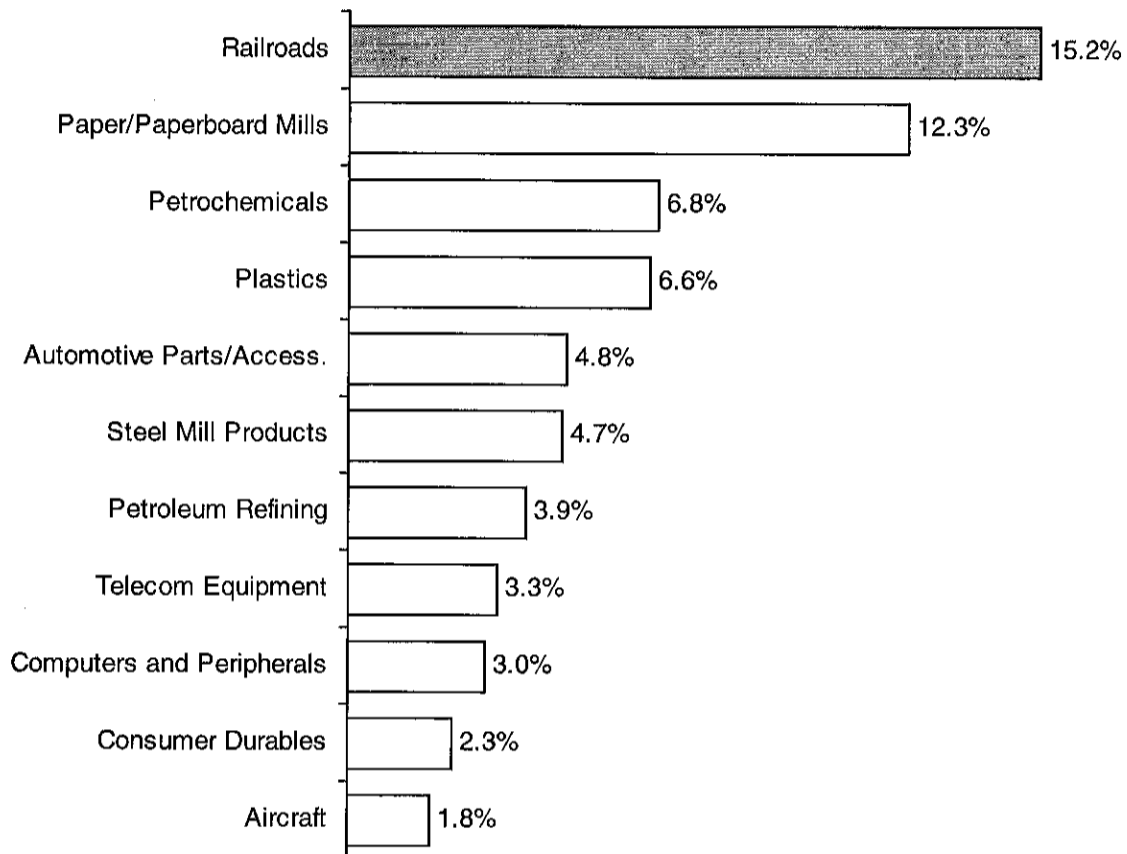
Figure 11

Freight Ton-Miles and Freight Revenues  
for Intercity Trucks and Class I Railroads –  
1980-1997



Note: Data not available for 1998.  
Source: Mercer analysis; Eno Foundation; Association of American Railroads.

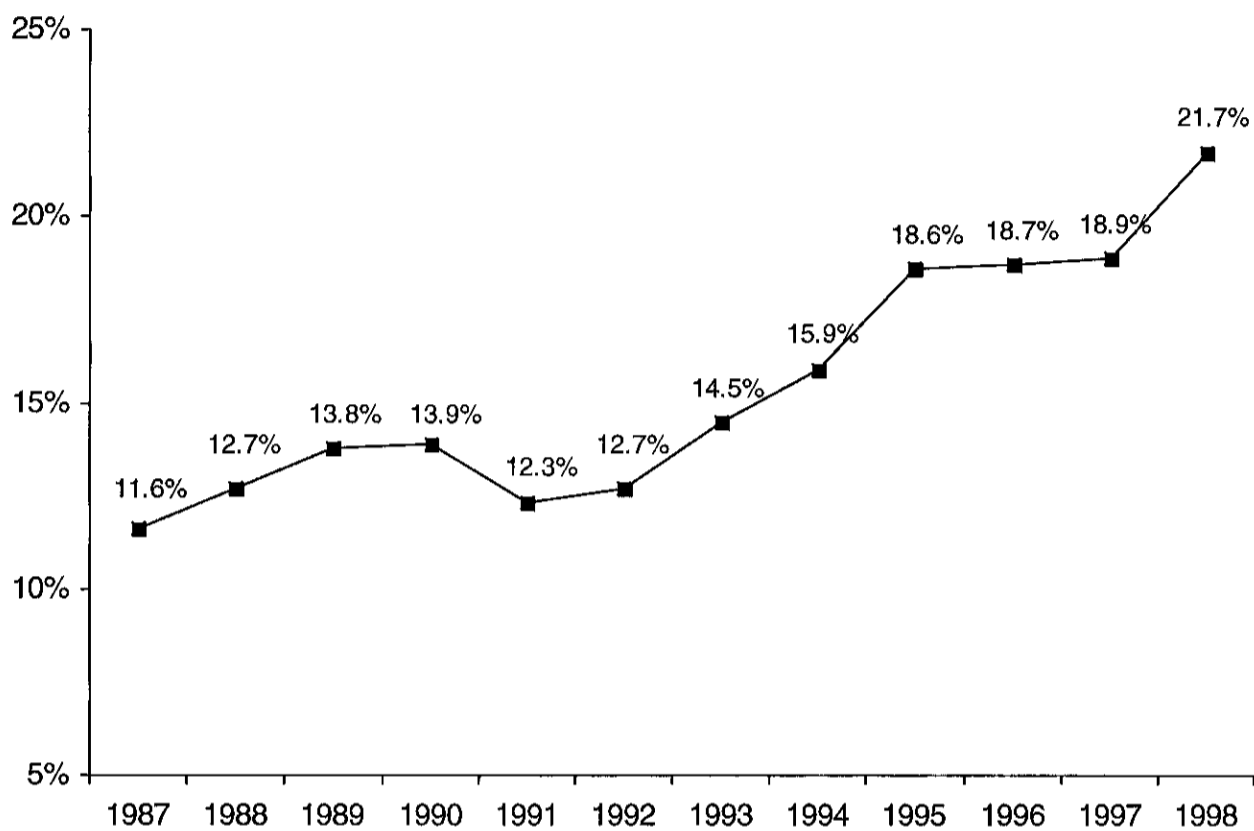
**Figure 12**  
**Average Annual Capital Expenditure as a**  
**Percentage of Revenues for Various U.S.**  
**Industries – 1990-1996**



Source: U.S. Census Bureau, Association of American Railroads, Mercer analysis.

Figure 13

**Class I Capital Expenditures as a Percentage of  
Operating Revenue – 1987-1998**



Source: Association of American Railroads, *Ten-Year Trends* 1999.

## **Appendix A. Qualifications and Experience of Hugh L. Randall and William C. Harsh, Jr.**

### ***Hugh L. Randall***

Mr. Randall is a vice president and director of Mercer, and he leads the firm's global Transportation Practice. He joined Mercer in January 1991. While at the firm, Mr. Randall has directed a variety of consulting projects for railways, trucking companies, parcel carriers, maritime shipping companies, freight forwarders and contract logistics users and providers. These studies have encompassed transportation and logistics activities in North America, Europe, Asia, Latin America and Southern Africa.

For transportation companies, Mr. Randall has carried out a variety of business strategy and market entry studies, operations improvement studies, and organization realignment studies. For manufacturers and distributors seeking to improve logistics functions, Mr. Randall has directed a series of global supply chain refinement and process improvement studies.

In addition, Mr. Randall has conducted numerous studies for contract logistics providers and potential providers, and for contract logistics users and potential users. Between 1994 and 1998 he co-authored with Robert Leib of Northeastern University an annual survey of North American and European contract logistics users and providers. This leading-edge research initiative was presented each year at the Council of Logistics Management conference and was the subject of articles appearing in leading business and trade periodicals, including the *Wall Street Journal*, *Traffic World*, *American Shipper*, *Traffic Management* and *Distribution Magazine*.

Before joining Mercer, Mr. Randall was senior vice president and managing director of CSX/Sea-Land Logistics. Previously, as a vice president of Booz•Allen & Hamilton, he managed consulting projects involving strategy, marketing, and operations for railway equipment suppliers and major U.S. and international railways and motor carriers.

As executive vice president of Ryder/PIE Nationwide, Mr. Randall was responsible for that trucking company's financial, planning, and administrative functions. Also, he was general manager of the Atlantic Region and assistant vice president – operations for Consolidated Rail Corporation (Conrail).

### ***William C. Harsh, Jr.***

Mr. Harsh is a vice president in the Transportation Practice. He joined the firm in March 1989. While at Mercer he has led engagements involving railroad financial transactions in the United States and Latin America. These engagements include the privatization of the national railroad

systems of Mexico, Chile and Peru, the privatization of the commuter railroad system and subway of Buenos Aires, Argentina, the creation of a public-private track-sharing arrangement on the South Shore Railroad and the privatization of the freight operations of the Long Island Railroad. In the course of these engagements, he has gained substantial, first-hand experience in analyzing and evaluating alternative railway asset ownership and operating structures, and he has tested these structures in market transactions with railway operators from North America, South America, Europe and Asia. Mr. Harsh also was the project manager in Mercer's engagement as the lead economic witness on behalf of the railroad industry before several Presidential Emergency Boards. In this capacity he developed many of the financial modeling and analytic frameworks that have supported Mercer strategic engagements in the railroad industry.

Prior to joining Mercer, Mr. Harsh was a consultant to the Association of American Railroads, assistant to the Chairman of the Interstate Commerce Commission, assistant to the Secretary of the United States Department of Transportation, chief of the special projects division in the Office of Federal Assistance at the Federal Railroad Administration, and chief of the bureaus of policy analysis and railroads at the Illinois Department of Transportation. He has received the World Bank Group's 1999 President's Award for Excellence for his work in restructuring the railroads of Mexico and Peru, the United States Department of Transportation Secretary's Award for Meritorious Achievement for his work in restructuring Conrail lines in New England, and United States Department of Transportation Superior Achievement Awards for his work in preparing the Department's report to Congress on the future structure of the railroad system in the Northeast and the Department's report to Congress on the Amtrak route system.

## **Appendix B. Qualifications and Experience of Mercer Management Consulting, Inc.**

### ***Focus on Growth***

For a quarter of a century, Mercer Management Consulting, Inc. (Mercer), has been helping senior executives of major corporations lead their organizations to growth and prosperity in the face of industry upheaval, marketplace change, and competitive realignment. Our in-depth, integrated knowledge of customers, competitive economics, and alignment enables us to formulate creative yet practical strategies for long-term business success.

Drawing on the combined talents of our more than 1,200-member international staff, we design our consulting teams to include the mix of functional expertise and industry knowledge best suited to each client's needs, while at the same time maintaining a general management perspective. Our reality-based approach to consulting consistently produces tangible, sustainable results for clients, helping them achieve their full growth potential, enhance their financial and operating performance, and maximize their shareholder value.

Mercer has pursued an aggressive strategy of international growth, reflecting the globalization of markets, the integration of regional economies, and the strategic requirements of leading commercial enterprises. Mercer maintains offices in Beijing, Boston, Buenos Aires, Chicago, Cleveland, Dallas, Hong Kong, Lisbon, London, Madrid, Mexico City, Montreal, Munich, New York, Paris, Pittsburgh, San Francisco, Toronto, Washington, D.C., and Zurich. The firm is a member of the *Mercer Consulting Group*, the global consulting organization of the *Marsh & McLennan Companies* family of professional service organizations.

Mercer's private sector clients – most of them *Fortune 500* firms – include a wide variety of transportation companies, consumer products firms, retailers, industrial companies, financial institutions, travel and leisure companies, telecommunications service companies and equipment manufacturers, electric and gas utilities, and other energy companies. Mercer's public sector clients include many of the world's largest government-owned railways, international financing institutions such as the World Bank, the European Bank for Reconstruction and Development, and the U.S. Trade and Development Agency; national and state governments; regulatory agencies; and operating authorities around the world.

### ***Transportation Consulting***

Mercer's Transportation Group is one of the largest such consultancies in the world, providing a broad range of assistance to transportation carriers and to the users and regulators of transportation services. Mercer is actively engaged in projects across the full range of the

transportation sector, including:

- Air freight
- Air passenger
- Financial services
- Freight forwarding and customs brokerage
- Inland waterways
- Intermodal services
- Motor carriers
- Ocean shipping (liner, tanker, bulk)
- Ports
- Rail freight
- Rail passenger (commuter and intercity)
- Small parcel
- Toll roads and highways
- Transportation and equipment supply
- Urban transportation and transit
- Warehousing and distribution

The Transportation Group also offers capabilities in international market research, evaluating new business opportunities, developing strategic plans and specific marketing plans, designing organizational structures to manage businesses, and implementing transportation services.

Mercer's transportation clients include national and regional governments on six continents as well as many of the world's largest railroads, motor carriers, leasing companies, and industrial and consumer manufacturing firms.

### ***Mercer's Rail Practice***

Mercer's Rail Practice employs the largest and most experienced staff in the world dedicated to the rail industry and is widely recognized as the premier management consultancy to state-owned and private freight and passenger railroads. It has carried out major strategic, operational, and financial planning and evaluation assignments for nearly all major railroads in North America and for state-owned railways in Europe, South America, Africa, and the Pacific Rim.

Mercer is known for its innovation and creativity. Mercer staff were heavily involved in the restructuring of the bankrupt northeastern U.S. railroads into Conrail, both as consultants and as senior managers at Conrail. Mercer also spearheaded the regional railroad movement following deregulation, and has led the development of unique public-private partnerships and operating agreements that have helped railroads recover from bankruptcy and compete effectively in a deregulated environment.

## Appendix C. Railroad Industry Capital Improvements to Increase Capacity

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Type of Improvement	Examples of Major Improvements
<b>Addition of Multiple Track</b>	<ul style="list-style-type: none"> <li>• BNSF Alliance-Gillette line (NE and WY)</li> <li>• BNSF Transcontinental Mainline (TX and OK)</li> <li>• BNSF/UP – Orin Line (WY) (2 and 3 tracks)</li> <li>• BNSF – Spokane-Pasco Line (WA)</li> <li>• CSX – Former B&amp;O mainline (IN and OH)</li> <li>• NS – Cincinnati-Chattanooga line (TN)</li> <li>• NS-Fort Wayne (IN)</li> <li>• UP – East of North Platte (NE) (3 tracks)</li> <li>• UP – Former Sunset Route (AZ and NM)</li> <li>• UP – Former CNW mainline (IA)</li> <li>• UP – Marysville line (NE)</li> <li>• UP – South Platte Valley line (NE)</li> </ul>
<b>Construction of New Sidings</b>	<ul style="list-style-type: none"> <li>• CSX – Memphis Gateway line (IN)</li> <li>• NS – Buffalo-Cleveland line (NY and OH)</li> <li>• NS – Lehigh line (NJ)</li> <li>• NS – Shenandoah corridor (VA and TN)</li> <li>• NS – Bellevue-Kansas City line (OH IN IL and MO)</li> </ul>
<b>Major Track Upgrades</b>	<ul style="list-style-type: none"> <li>• NS – Southern Tier Route (NY)</li> <li>• NS – Deepwater Line (WV)</li> </ul>
<b>Mainline Restoration and Bypasses</b>	<ul style="list-style-type: none"> <li>• BNSF – Stampede Pass (WA)</li> <li>• NS – Cincinnati Yard bypass (OH)</li> <li>• NS – Former Central of Georgia mainline (GA and AL)</li> <li>• NS – Fort Wayne line (IN)</li> <li>• NS – Fulton-Corinth (KY and TN)</li> <li>• UP – Hastings bypass (NE)</li> <li>• UP – Egbert branch (WY)</li> </ul>
<b>Signal and Interlocking Upgrades</b>	<ul style="list-style-type: none"> <li>• CSX – Former B&amp;O mainline (IN and OH)</li> <li>• KCS - Shreveport (LA)</li> <li>• NS – Harrisburg line (PA)</li> <li>• UP - Tucumcari line (NM)</li> <li>• UP – Kansas Pacific line (KS and CO)</li> </ul>

Type of Improvement	Examples of Major Improvements
<b>New or Upgraded Connections</b>	<ul style="list-style-type: none"> <li>• CSX – Chicago (IL), Greenwich (OH), Crestline (OH), Marion (OH), Sidney (OH)</li> <li>• NS – Buffalo (NY), Harrisburg (PA), Lehigh line (PA), Philadelphia (PA), Wilmington (DE), Fort Wayne (IN), Alexandria (IN), Butler (IN), Tolleston (IN) Sidney (IL), Kankakee (IL), Tolono (IL), Oak Harbor (OH), Vermillion (OH), Hagerstown (MD), Detroit (MI), Columbus (OH), Bucyrus (OH)</li> <li>• UP – Houston (TX)</li> </ul>
<b>Track Coordination</b>	<ul style="list-style-type: none"> <li>• CN/CP Fraser River Canyon (BC)</li> <li>• NS/CSX Erie (PA)</li> <li>• NS/CSX Chicago area (IL)</li> </ul>
<b>Expansion or Upgrade of Classification Yard Facilities</b>	<ul style="list-style-type: none"> <li>• CSX – Blue Island (IL), Willard (OH), Indianapolis (IN), Selkirk (NY), Buffalo (NY),</li> <li>• KCS - Shreveport (LA)</li> <li>• NS – Buffalo area (NY)</li> <li>• UP – Roseville (CA)</li> </ul>
<b>New or Upgraded Intermodal Terminals</b>	<ul style="list-style-type: none"> <li>• CN – Harvey (IL)</li> <li>• CP – Calgary (AB) and Vancouver (BC)</li> <li>• CSX – New terminals at Collinwood (OH), Philadelphia (PA), Chicago (IL), Atlanta (GA)</li> <li>• CSX – Expanded terminals at Chicago (IL), Little Ferry (NJ)</li> <li>• NS – New terminals at Harrisburg (PA), Bethlehem (PA), Austell (GA), Toledo (OH), Baltimore (MD), Charlotte (NC), Bellevue (OH)</li> <li>• NS – Expanded terminals at Baltimore (MD), Northern New Jersey area, Morrisville (PA), Pittsburgh (PA), Charlotte (NC), Knoxville (TN), Memphis (TN), Chicago (IL), Cincinnati (OH), Columbus (OH), St. Louis (MO)</li> <li>• VP – Marion (AR)</li> </ul>
<b>New or Upgraded Automotive Terminals</b>	<ul style="list-style-type: none"> <li>• NS – Philadelphia (PA) and Baltimore (MD)</li> <li>• NS – “Mixing Centers” at Kansas City (MO), Fostoria (OH), Shelbyville (KY) and Chicago (IL)</li> </ul>
<b>Overhead Clearance Upgrades</b>	<ul style="list-style-type: none"> <li>• Amtrak- Catenary raising Perryville-Baltimore (MD)</li> <li>• CN – Port Huron Tunnel (MI and ON)</li> <li>• CSX – Virginia Avenue Tunnel (DC)</li> <li>• NS – Pattenburg Tunnel (NJ)</li> <li>• NS – Columbus-Cincinnati (OH)</li> <li>• NS – Shenandoah line (VA)</li> </ul>